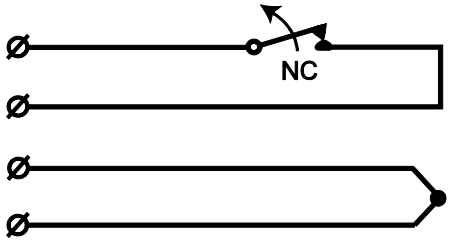
ALARMTECH Detectors

Magnetic Contact
Recessed mounting

Instruction Manual — MC 240

CIRCUIT DIAGRAM



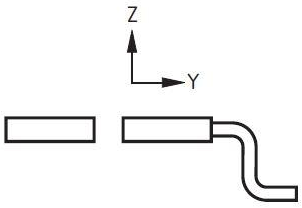
DESCRIPTION

MC 240 is a versatile magnetic contact used in both alarm and security access control systems for protection of doors, gates and windows against unauthorized opening. A wide range of accessories enables the contact to be recessed- or surface-mounted on a variety of surfaces, including ferromagnetic materials.

MOUNTING INSTRUCTIONS

- Contact and magnet should be installed axially, corresponding to each other.
- Self-cutting and self-locking thread enables direct installation in ϕ 10 mm holes in wood and plastic.
- Appropriate accessory must be used for installation in ferromagnetic environment.

DISTANCES/DIRECTIONS



TECHNICAL DATA

Working environment	Wood (Y direction) [1)]	Wood (Z direction) [1)]	Steel[1)]
Make distance	typ. 27 mm ±40 %	typ. 23 mm ±40 %	see distance table
Break distance	typ. 33 mm ±40 %	typ. 26 mm ±40 %	see distance table
Contact type	form A, SPST		
Switching voltage max.	48 V DC/AC		
Switching current max.	500 mA DC/peak AC		
Contact rating max.	10 W		
Estimated life expectancy	>20 million switching operations at 10 V/4 mA		
Cable	ϕ 3,4 mm, 4x0,182 mm^2		
Environmental class (EN50130-5:2011)	IIIA		
Operating temperature range	-40°C to +70°C		
Operating humidity range	max. 95% r. h.		
Housing protection	IP67, IK04		
Housing material	aluminum alloy		
Dimensions contact part	ϕ 11 x 36 mm		
Dimensions magnet part	ϕ 11 x 36 mm		
Security grade	EN50131-2-6:2008 Grade 2, VdS 2120 Class B		
Approvals	VdS EN-ST-000087 & G193513 (class B), SBSC 9-196, F&P 10.212-14710, FG MKT-1001/09, INCERT B-582-1003, NF&A2P 2124030001A0		

[1)] Make distance is always shorter than break distance

OPERATING PRINCIPLE

MC 240 magnetic contact has two parts: the contact part with a reed switch and the magnet part. In its neutral position the reed switch remains closed under the force of the magnetic field. Opening the monitored object increases the distance between the reed switch and the magnet. This reduces the influence of the magnetic field on the reed switch until it opens and activates an alarm.

Magnetic contacts should not be installed in the vicinity of strong magnetic fields.

INSTALLATION

Detailed installation instructions can be found in MC 240 Installer Manual.

Contact and magnet should be aligned axially in the frames and leaves of the monitored objects (windows, doors etc.). Offset will reduce the working distances. The contact should be mounted in the stationary part of the monitored object (ex. door frame) and the magnet in the movable part (ex. door leaf). Before mounting, holes must be drilled. The self-cutting and self-locking thread of the housing enables easy and reliable installation in ϕ 10 mm holes in wood and plastic.

Twisting the contact housing counterclockwise 2-3 times before mounting will protect the cable from mechanical stress.

For sites where it is impossible to mount the contact directly, a variety of accessories is available.

Accessories with a strong magnet provide a bigger working distance for more demanding applications and maintain the parameters of the magnetic contact when mounted in ferromagnetic environment.

Accessories for surface mounted applications provide installation solutions for sites where recessed mounting is not suitable.

Heavy duty accessories protect the MC 240 from mechanical damage and provide a large operating distance enabling the magnetic contact to be installed on garage doors, industrial gates etc.

Aluminium brackets can be used to mount the contact parts away from a ferromagnetic surface or to solve problems with aligning the contact with the magnet. Contact and/or magnet should be screwed to the oval slots in the brackets and adjusted to a suitable position.

The working distances of the magnetic contact will be decreased in the proximity of ferromagnetic surfaces. The closer the contact/magnet is installed to the ferromagnetic surface, the lower the working distances

Only non-ferromagnetic screws may be used when mounting the contact using accessories.

After the installation, use an ohmmeter to check the electrical connections and test the function of the magnetic contact.

Warning: applying excessive force to the housing of the contact may damage the glass body of the reed switches inside.

Warning: appropriate accessories must be used for installation in ferromagnetic environment.

RESISTORS (OPTIONAL)

MC 240 is available in two additional options with resistors of the chosen value: MC 240-R with one resistor parallel to the alarm switch and MC 240-2R with two resistors in 2EOL configuration.

DISTANCE TABLE

Contact	Accessory	Distance on wood [mm] (Y direction)		Distance on steel [mm] (Y direction)	
		Make	Break	Make	Break
MC 240	-	27	33	X	X
	MC 200-S3	24	29	14[a)]	17[a)]
	MC 200-S11	27	33	X	X
	MC 200-S12	38	44	19	22
	MC 200-S21	27	33	X	X
	MC 200-S22	38	44	24	29
	MC 200-S31	27	33	X	X
	MC 200-S32	38	44	19	22
	MC 200-4, MC 200-5	51	59	X	X
	MC 200-4, MC 200-8	51	59	36[b)]	42[b)]
	MC 200-6, MC 200-5	51	59	35[c)]	40[c)]
	MC 200-6, MC 200-8	51	59	35[c)]	40[c)]
	MC 200-7, MC 200-8	51	59	36	42

X – not recommended;

[a)] measured with MC 400-4 spacers (included in the MC 200-S3 set)

[b)] measured with contact part installed 15 mm above the ferromagnetic surface (e. g. using MC L/MC Z accessory);

[c)] contact part mounted on non-ferromagnetic surface